

## REMARKS

### Status of case

Claims 1-14 are currently pending in this case. Claims 1, 4, 9, and 10 are independent claims.

### Claim Rejections under 35 USC §102

Claims 1-12 are rejected under 35 U.S.C. §102(a) as being anticipated by PCT No. WO 02/29427 (Nguyen).

#### **1. Lack of Teaching in Nguyen for “Node Function Controlling Unit”**

Applicants previously argued that the Nguyen reference did not teach the “node function controlling unit” as recited in claim 1. See also claims 4 and 10. In response, the final Office Action stated the following:

Nguyen teaches a node function location controlling unit for relocating functions of functional nodes and data used for the functions in said network into an optimum condition (if one or more errors or congestion are detected...following such detection a messaging step is performed which sends an activation message to Analysis Engine. Analysis Engine retrieves data necessary for analysis from Data Store. The retrieved data is used in the next step of problem formulations. This entails the formulation of the route optimization problem. The next step is the step of problem solving which formulates an optimized routing solution. Following this step...a step of messaging to Configuration Engine is performed. Configuration Engine retrieves both the current solution and the new solution from Data Store. The next step determines the optimal change sequences, which calculates the changes as to ensure minimal impact to existing traffic. The difference between the solution reroute and the original routing shows two changes...must be made to the network routing configuration. Configuration Process makes the changes to the elements in the Network, to affect the routing of various demands in Network – see Nguyen, page 21, line 9 – page 26, line 19), in accordance with said statuses of node resources which are managed by said resource managing unit (data collected includes network faults, which include the up/down indication of network elements and various error conditions of such network elements – Nguyen, page 18, line 19 – page 19, line 11), in response to an instruction of relocation (therefore it is more efficient and produces less network impact on the network if Demand 3 is rerouted first to path A-B-C-D-E. Following Demand 2 can be rerouted to path A-B-D-E. Configuration Process makes the changes in the elements in Network, to affect the routing of various demands in Network – see Nguyen, page 26, line 20 – page 27, line 15).

To clarify, Applicants present amended claim 1, which recites “a node function location controlling unit, in response to an instruction of relocation, analyzing current available node resource based on the statuses of the node resources managed by the resource managing unit,

determining new node locations of node functions, and relocating the node functions at the new node locations”. See also claim 4. In contrast, Applicants have reviewed the Office Action’s response reproduced above and respectfully maintain that the Nguyen reference does not teach the “node function controlling unit” as currently recited in claim 1. Of note, the response above does not mention or even suggest any type of reassignment or relocation of any node functions – particularly in response to an instruction of relocation and in which the current available node resource is analyzed based on statuses of the node resources. Rather, the response above focuses on the restructuring of the path. In fact, the very example given in the response above relates to the restructuring of the path. The response cites that a path may comprise A-B-C-D-E. Using the teaching in Nguyen, including the Configuration Process, the path is “rerouted to path A-B-D-E.” Applicants have analyzed both the Nguyen reference as well as the response above (which block quotes sections of the Nguyen reference) and conclude that the Nguyen reference does not teach any relocation of node functions as presently claimed. For this reason alone, claims 1, 4, and 10 are patentable over the cited references.

## **2. Lack of Teaching in Nguyen for “Adaptive Control Determining Unit”**

Applicants previously argued that the Nguyen reference did not teach the “adaptive control determining unit” as recited in claim 1. See also claims 4 and 10. In response, the final Office Action stated the following:

Nguyen teaches an adaptive control determining unit for determining whether or not it is necessary to transmit either or both of said instruction of relocation to said node function location controlling unit and said instruction of restructuring to said path structure controlling unit on the basis of said statuses of node resources and said statuses of link resources which are managed by said resource managing unit (Analysis Engine retrieves data necessary for analysis from Data Store. The retrieved data is used in the next step of problem formulations. This entails the formulation of the routing optimization problem. The next step is the step of problem solving which formulates an optimized routing solution. Following this step...a step of messaging to Configuration Engine is performed. Configuration Engine retrieves both the current solution and the new solution from Data Store. The next step determines the optimal change sequences, which calculates the changes as to ensure minimal impact to existing traffic. The difference between the solution reroute and the original routing shows two changes...must be made to the network routing configuration. Configuration Process makes the changes to the elements in Network, to affect the routing of various demands in Network -see Nguyen, page 22, line 3 -page 26, line 19), and transmitting said instruction of relocation when the transmission of said instruction of relocation is determined to be necessary or transmitting said instruction of restructuring when the transmission of said instruction of restructuring is determined to be necessary (a step of messaging to Configuration Engine

is performed. Configuration Engine retrieves both the current solution and the new solution from Data Store. The next step determines the optimal change sequences, which calculates the changes as to ensure minimal impact to existing traffic. The difference between the solution reroute and the original routing shows two changes.. must be made to the network routing configuration. Configuration Process makes the changes to the elements in Network, to affect the routing of various demands in Network -see Nguyen, page 24, line 16 -page 26, line 19).

Again, after reviewing the response to Applicants' argument, Applicants maintain respectfully maintain that the Nguyen reference does not teach the "adaptive control determining unit" as recited in claim 1. The adaptive control determining unit makes the following determination: "determining whether or not it is necessary to transmit either or both of said instruction of relocation to said node function location controlling unit and said instruction of restructuring to said path structure controlling unit". In other words, the adaptive control determining unit determines whether to relocate the nodes and/or restructure the paths. Reviewing the response to the Applicants' argument, the Office Action cites the identical disclosure as support for teaching the "path structure unit" that restructures the paths, the "node function controlling unit" that relocates the functions of the nodes, and the "adaptive control determining unit" that makes the decision whether it is necessary to instruct one or both of the "path structure unit" and the "node function controlling unit". Applicants question how it is possible that the same disclosure can support that the Nguyen reference teaches restructuring the paths, relocating the functions of the nodes, and the determination whether to one or both of restructuring the paths and relocating the functions of the nodes. For at least this reason, claims 1, 4, and 10 are patentable over the cited references.

### **3. Lack of Teaching in Nguyen for "Lock Controlling Unit"**

Applicants previously argued that the Nguyen reference did not teach the "lock controlling unit" as recited in claim 9. In response, the final Office Action stated the following:

The examiner respectfully submits that Nguyen teaches a lock controlling unit for controlling a lock of a certain resource, when said certain resource is controlled by a certain network structure controlling device to achieve a relocation of functions of nodes and data used for the functions in said network or to achieve a restructuring of a structure of paths in said network (Analysis Engine retrieves data necessary for analysis from Data Store. The retrieved data is used in the next step of problem formulations. This entails the formulation of the routing optimization problem. The next step is the step of problem solving which formulates an optimized routing solution. Following this step...a step of messaging to Configuration Engine is performed. Configuration Engine retrieves both the current solution and the new solution from Data Store. The next step determines the optimal change sequences, which calculates the changes as to ensure minimal impact to

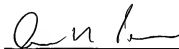
existing traffic. The difference between the solution reroute and the original routing shows two changes...must be made to the network routing configuration. Configuration Process makes the changes to the elements in Network, to affect the routing of various demands in Network - see Nguyen, page 22, line 3 - page 26, line 19), for avoiding said certain resource being controlled by another network structure controlling device, in response to a request for a lock control from said certain network structure controlling device (User Constraints include priority levels for customers, traffic and any user authorization for network configuration - see Nguyen, page 26, lines 1-19). Priority levels indicate that certain customers, traffic and any user authorization for network configuration are given precedence in accessing system resources, and thus may prevent competing entities from accessing those resources currently under control.

To clarify, Applicants present amended claim 9, which recites “a lock controlling unit, in response to a request for a lock control, for locking control of a certain resource thereby preventing the network structure controlling device from relocating functions of the certain resource and from restructuring of the paths related to the certain resource”. Thus, the lock controlling unit locks control, “preventing the network structure controlling device from relocating functions of the certain resource and from restructuring of the paths related to the certain resource”. The Nguyen reference does not teach or even suggest this type of locking – namely preventing the relocating of functions. For at least this reason, claim 9 is patentable over the Nguyen reference.

### SUMMARY

If any questions arise or issues remain, the Examiner is invited to contact the undersigned at the number listed below in order to expedite disposition of this application.

Respectfully submitted,



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